

IN THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers:

1 1. (Amended) Process for a chemical vapor deposition of layers of a material on a
2 substrate (10) which extends generally in a plane, characterized in that it comprises:
3 a step consisting in placing the substrate (10) in a duct (6) made of a refractory
4 material in which are flowing gaseous compounds necessary for the deposition, this
5 duct (6) being interposed between the substrate (10) and first (8) and second (9) heating
6 means located on either side of the plane of the substrate (10);

7 a step consisting in heating the substrate (10) by virtue of the radiation from the
8 heat of the duct (6), which is itself heated by the first (8) and second (9) heating means;

9 and

10 a step of depositing the compounds on the substrate, the compounds coming
from the flow of gas.

11 2. (Amended) Process according to claim 1, characterized in that it comprises a
2 step consisting in placing at least one heat shield (14, 15) around the first (8) and second
3 (9) heating means, this at least one heat shield being concentric with respect to the duct
4 and situated outside the first and second heating means.

1 3. (Amended) Process according to claim 1, characterized in that it comprises a
2 step consisting in generating a temperature gradient perpendicular to the plane of the
3 substrate (10) and oriented in a first direction.

1 5. (Amended) Process according to claim 1, characterized in that it comprises a
2 step consisting in creating a flow of a gas which is inert with respect to all of the

3 materials included in the reactor and with respect to the material to be deposited and to
4 the gases flowing in the duct (6).

1 6. (Amended) Reactor for a chemical vapor deposition of layers of a material on a
2 substrate (10) which extends mainly in a plane, comprising first (8) and second (9)
3 heating means located on either side of the plane of the substrate (10), characterized in
4 that it furthermore comprises a duct (6), made of a refractory material in which are
5 flowing gaseous compounds necessary for the deposition, this duct (6) being interposed
6 between the substrate (10) and the first (8) and second (9) heating means.

1 8. (Amended) Reactor according to claim 6, characterized in that the duct (6) has a
2 rectangular cross section and comprises two plates forming lower (37) and upper (38)
3 walls which are horizontal and parallel to the plane of the substrate (10) in the position
4 that it occupies during the deposition.

1 9. (Amended) Reactor according to claim 6, characterized in that it comprises at
2 least one heat shield (14, 15) around the first (8) and second (9) heating means.

1 12. (Amended) Reactor according to claim 10, characterized in that gas may be
2 made to pass via the outlet of the duct (6) between the internal space of the duct (6) and
3 the space lying between the duct (6) and the tube (3), so as to balance the pressure on
4 the walls (37, 38, 39, 40) of the duct (6).

1 14. (Amended) Reactor according to claim 8, characterized in that the first (8) and
2 second (9) heating means consist of a graphite strip or band placed flat, parallel to the
3 lower (37) and upper (38) walls of the duct (6), in a suitable geometry so that, in the
4 deposition zone, the deviations from the mean temperature on that surface of the
5 substrate (10) which is intended for the deposition are less than 3°C.

1 15. (Amended) Reactor according to claim 8, characterized in that the first (8) and
2 second (9) heating means are positioned, outside the duct (6) each at a distance of 1 to 3
3 mm from one of the lower (37) or upper (38) walls, respectively.

1 16. (Amended) Reactor according to claim 6, characterized in that the first (8) and
2 second (9) heating means may be raised to different temperatures.

1 17. (Amended) Reactor according to claim 6, characterized in that the first (8) and
2 second (9) means form only a single heating device placed all around the duct (6).

1 18. (Amended) Reactor according to claim 6, characterized in that the first (8) and
2 second (9) heating means are placed in the region of the deposition zone.

1 19. (Amended) Reactor according to claim 6, characterized in that the heating
2 means (8, 9) are supplied with a voltage of less than or equal to 230 volts.

1 20. (Amended) Reactor according to claim 6, characterized in that the duct (6) is
2 internally lined, in the hottest parts, continuously with a secondary duct made of
3 refractory material.

1 21. (Amended) Reactor according to claim 6, characterized in that the first (8) and
2 second (9) heating means are offset with respect to each other in the longitudinal
3 direction of the duct (6).